Decision Logic™

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Abstract

Decision Logic™ expresses graphically the way we reason to reach our decisions as an 'information flow protocol', and thus helps find out any reasoning flaws or un-necessary shortcuts — quite important when responsibility is high, such as in competitive environments or in the public domain.

1 Professional value

Decision is often hailed as 'what ultimately matters' — and it often is. To avoid decision-making as brute as that of the Gordian knot, an 'informed' kind of decision is sought after in most professional contexts, with much investment in obtaining rich data and processing it with advanced statistics. However, all of this could be in vain if the reasoning protocol contains deficiencies such as premature conclusions, the wrong comparisons, or *non sequiturs*.

Decision Maps™ deal with the process of reasoning involved in decision-making, representing its variants as information-flow protocols. Graphical expressions of reasoning patterns help discover *styles* of decision-making, as well as match them to the needs or expectations of particular applications — e.g. personal, enterprise, or the public domain.

2 Workflow

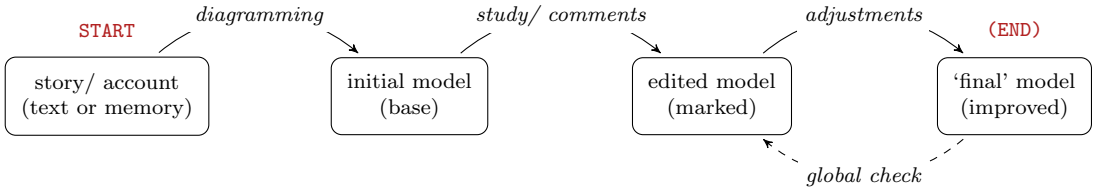

FIGURE 1 The work to be carried out over four (4) hours; a number of 'loop' iterations may be necessary to achieve a satisfactory model (CPD, DCD)

3 Programme

Introduction (1.5h)

- Focus: situation, procedure, reasoning (Figure 4)
- Exploring the reasoning; initial model (CPD, DCD)
- Verification; consensus; improving accuracy

Work Session (4h)

- Work in groups (2–4 people)
- Interactive assistance

Presentation, Discussion, and Conclusion (2h)

- Shared experiences
- Applicability issues

4 Technical notes

Audience

- *Administrators* (e.g. policy-makers, strategists)
- *Legal professionals* (e.g. lawyers, judges, police officers)
- *Medical doctors* (e.g. general practitioners, specialists)
- *Military officers* (e.g. strategy, operations)

Competences

- Identify and get to know elements of interest (e.g. 'indicators')
- Identify and get to know causal relationships between elements
- Distinguish between causal and computational relationships (e.g. in 'indices')
- Think clearly and explain how some elements may affect others
- Register and communicate this efficiently
- Identify information in existing documents regarding causal explanations
- Identify where action takes place in the system
- Think of the limits or boundaries of the system (e.g. 'closed' or 'open' type)
- Start thinking of 'special' elements (e.g. as points of concern or intervention)
- Think how to structure a problem (e.g. 'XYZ' format)
- Identify the tasks and stages of a process (e.g. along a timeline)

Techniques[a]

- Text mark-up — $\text{TMU}_{[\text{T}]}$
- Concise process diagrams — $\text{CPD}_{[\text{T}]}$ (Figure 2)
- Descriptive causal diagrams — $\text{DCD}_{[\text{T}]}$ (Figure 3)

Methods[b]

- Decision Model Analysis — $\text{DMA}_{[\text{M}]}$ (Figure 4)

[a] v. Perdicoúlis, 2014a
[b] v. Perdicoúlis, 2014b

FIGURE 2 Generic Concise Process Diagram (CPD)

5 Protocols

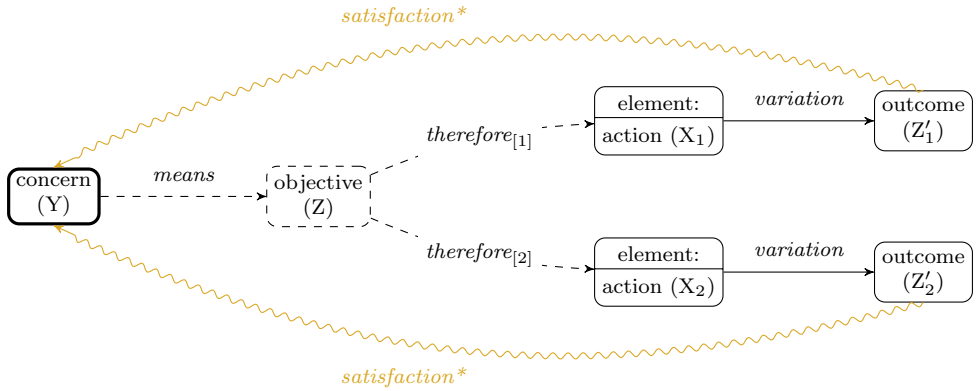

FIGURE 3 Generic Descriptive Causal Diagram (DCD); feedback and assessment in gold

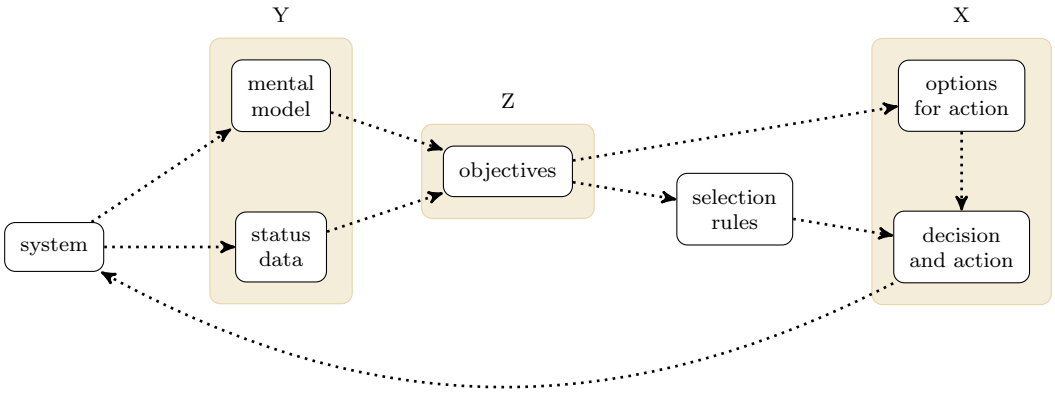

FIGURE 4 Decision Model Analysis (DMA) — systems learning model

6 Materials and preparation

Case-study/ Work material Participants are welcome to bring their own support material (e.g. stories, accounts, experience) in (human) memory or documentation (e.g. digital or printed media).

Software Diagramming can be carried out manually, with pencil and paper. Optionally, participants are welcome to use their own diagramming software, such as *Graphviz*, *LibreOffice Draw*, *OmniGraffle*, or *Visio*.

Stencils

Perdicoulis, A. (2011c) *OmniGraffle* stencil for CPD [`.graffle`]
Perdicoulis, A. (2011b) *OmniGraffle* stencil for DCD [`.graffle`]
Perdicoulis, A. (2011a) *Graphviz* node-and-edge starter file [`.dot`]

Folios

Perdicoulis, A. (2014b) *Methodology*. Perdicoulis Publishing: Folio Division, Technical Collection.
Perdicoulis, A. (2014a) *Language*. Perdicoulis Publishing: Folio Division, Technical Collection.

References

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Perdicoulis, A. (2011) Application Manual for 'Systems Thinking and Decision Making in Urban and Environmental Planning'. *Systems Planner*, **2**.

Perdicoúlis, A. (2010) *Systems Thinking and Decision Making in Urban and Environmental Planning*, Cheltenham: Edward Elgar.